Daily Log #9

Date: 12 February 2002, Lesson length: 45 minutes

What did you expect students to learn during the lesson? I expected students to learn to make a worm bin and value the importance of vermi-composting as a new way of recycling. This was a continuation of the essential questions: Knowing structure and function, what are the earthworm's needs and adaptations for their environment? Why are earthworms important? How can earthworms be used to address the problem of excess food waste in society?

Describe the instructional strategies, learning activities and resources used by you and your students during the lesson. Before making the bins we reviewed the materials that were important for making a worm bin. We also discussed the importance of each step of the worm bin. For example, students knew that there needed to be two bins, one to put holes in the bottom so the worms would not be too wet and drown and the other bin was to catch the water from the bin with holes. They also knew that the bedding needed to be damp and fluffy for good worm movement. I modeled to the students how to prepare the bedding which were strips of newspaper dipped in water than squeezed to remove excess water. Additionally, they knew the lid to the bins needed to have holes for the worms to breathe. Prior to the students starting the activity, I asked them how the worms were going to digest their food. One student remembered that there needed to be sand in the bin for the worms to swallowed and leave in its gizzard to grind up the food. After I made sure they knew what they were doing, they worked in their groups and gathered their material and started to make the bins. The students enjoyed this very active hands-on activity.

To complete this unit students needed to write to student council explaining whether or not they thought vermi-composting was a good idea for the school.

Describe how you monitored students' understanding of the lesson's main concepts and what you found. It was important to review the set up of the worm bin before allowing the students to get started on the project. Their participation during the instruction and the project showed me that they understood my directions. I found that the students were very eager to apply what they had learned about making a worm bin.

I plan to read students letters to find out if they have a grasp on the subject. This letter should help me see if they find earthworms and vermi-composting beneficial to our environment.

Describe how you accommodated student' learning needs during the lesson, and how you plan to adjust your teaching for the next lesson, if necessary, based on the students' learning today. Working in groups and clarifying the steps needed to make a worm bin helped those who have

difficulty with directions. I also participated along with the students to show them that this was even important enough for me to be a part of this activity. This brought a lot of encouragement to the groups that were working a little slower and motivated them to finish the project.

To reinforce what they learned from making the worm bin, the next time I do this lesson I think I will have students write the directions and explain why each step of making the worm bin was important. I think I will also have to stress that red wigglers are the best type of earthworm to do this type of composting. I think some of my students still think they can use any earthworm for vermi-composting.

Student #3 Student # 3 2/12/02

Best Environment for Worm Bins

Experimentation & Research Results:

- they Live a dark enviornment (sp)
- they Live a moist enviornment (sp)
- need sand in your worm bin
- need dead ~~critter matter~~, and plants so they could eat them and produce castings that are full of nutrients
- ~~could be mixed with potting soil~~

Missing some info! In the future, add more notes during the class discussion!

How much? A lot? A little?

← Better off with just plant materials. Animal stuff might smell bad! Y.

← That would be after vermicomposting

- They need to eat and some Earthworm Preferred food is:

↑ What kind?

• Banana peels	• orange peels	Yes!!
• Apples	• grapefruit rinds	
• pears	• tomatoes	
• onion peels	• cabbage	
• carrots	• celery	
• cucumbers	• lettuce	
• beans	• broccoli	
• kale	• Tea leaves	

- put eggshells in the compost pile for a good source of calcium and protein
- don't put seeds in bin because it could cause plants to grow
- A bin could be made out of cinder blocks

What else?

- should be about two feet high ← Why? Is that necessary?
- need lid to think it's dark
- ~~little~~ holes so they ~~think~~ could breathe
- air space so they could move

What are you going to use for bedding? Why?

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Student Council Letter

The objective of this letter will be to persuade the student council to consider (or not) vermicomposting in the cafeteria.

Introduction Paragraph

Your first paragraph will be your entrance into the piece and should establish to your reader who you are and why you are writing this letter. Why have you decided to support vermicomposting (or not) and what makes you the expert on this subject?

Remember:

1. Grab the readers interest
2. Include your position on vermicomposting
3. Establish credibility to your reader

Body Paragraphs

When you are finished with your introduction you will explain the following topics in your letter:

Why is important (or not) to recycle food waste?

What worms are the best composters?

How can vermicomposting help (or not help) the school?

How can vermicomposting help (or not help) the community?

What are your recommendations for making a worm bin?

Remember:

1. Organize your information in the best order that makes sense.
2. Sight specific evidence and examples from research that will help prove or illustrate your purpose or main idea.
3. Try to use transition sentences between paragraphs.

Conclusion Paragraph

The conclusion will be your final chance to make one last attempt at persuading the student council to take action and help support (or not support) vermicomposting.

Format

Letter must be typed

Use Business Letter Format

No larger than 14 pt font

Student Council Address is:

468 South Avenue

New Canaan, CT 06840

A 7

Good luck and have fun! SC

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Student Council
468 South Avenue

Dear Student council:

I, , want to show you how important vermicomposting is and all of the advantages to it. My class and I have done a lot of research on this topic and so far we have found what worms to use, what they like to eat, what to and not to put in the piles/bins, and all of the general facts of vermicomposting. Vermicomposting sounds like a great idea and I think that Middle School should consider putting compost bins in the cafeteria to reduce the amount of waste, and to produce rich soils for gardens. This is a very fun thing to do and great for making healthy soil, especially if you use the proper worms.

Composting with the red wiggler worms, is a great idea. It is really important to recycle the foods that are leftover because you could use it for helpful things instead of throwing them in a dump! The worms eat all of the dead animal matter and plants, produce castings that are full of nutrients, and make air tunnels through the soils so there is space for roots. This will help our school and even other schools by reducing the amount of garbage we have and use it for something important, like gardening. This won't only help schools but communities as well because they will have less garbage, more soil, and prettier gardens outside. This is really easy too, because all you have to do is make a worm bin.

To make a worm bin you would take two separate bins and one lid. Then after putting one bin to the side you would punch holes in the bottom of one bin for water drainage, and holes in the top of the lid for air for the worms to breathe. After you are done with that step, you place damp shreds of newspaper in the bin with holes in it until it reaches the top, but you don't' want it to wet because worms only like the damp. Third, you should put a couple of cups of sand in it so they could eat it and it could sit in its gizzard to grind up foods. Lastly you should place the bin with holes, with the lid on it, in the other bin so the water that comes out the bottom goes into the other bin. It's that simple! And soon enough you will have tons of rich soil to create a healthy garden! This is a great idea ; should definitely try it!

In conclusion, I hope you are well convinced that vermicomposting is a great way to reduce the amount of food waste and have rich soils for gardening. Lastly, I think you should definitely take action and build a worm bin and you will have rich soils for farming, and selling! Making a worm bin is easy, and look at all of the advantages, and results?! In conclusion, I hope that when you are done reading this paper you want to get up and start vermicomposting right now!

Sincerely,

Student #3

Student Council Letter Grading Rubric

The objective of this letter was to persuade the student council to consider (or not) vermicomposting in the cafeteria.

Introduction Paragraph (6 points)

Total Points Awarded: 5

Grabbed the readers interest	0	(1)	2
Included your position on vermicomposting	0	1	(2)
Established credibility to your reader	0	1	(2)

0 points: Did not include information
1 point: Included the information, but weak
2 points: Included the information and met expectation

Body Paragraphs (12 points)

Total Points Awarded: 10

Why is it important (or not) to recycle food waste? what else did we discuss in class?	0	(1)	2
What worms are the best composters? How do you know?	0	(1)	2
How can vermicomposting help (or not help) the school?	0	1	(2)
How can vermicomposting help (or not help) the community?	0	1	(2)
What are your recommendations for making a worm bin?	0	1	(2)
Organized your information in the best order that made sense	0	1	(2)

0 points: did not answer the question
1 point: partially answered the question
2 points: sighted specific evidence and examples from research that answered the question that helped prove or illustrate your purpose or main idea.

Conclusion Paragraph (4 points)

Total Points Awarded: 4

0 points: no conclusions made
1 point: conclusion did not support original position
2 points: conclusion weakly supported the original position
3 points: conclusion supported the original position without much persuasion
4 points: conclusion was highly persuasive and supported the original position

Format (3 points)

Total Points Awarded: 3

Letter was typed	0	1
Business Letter Format	0	1
No larger than 14 pt font	0	1

0 points: no
1 point: yes

Overall Points Awarded: 23 out of 25 points

Grade: A- Nicely written!! 99